

Section I: Anatomy and Physiology of the Eye**CHAPTER 1
ANATOMY AND DEVELOPMENT OF
THE EYE****Short Answer**

1. Mention the ocular coats of eye. 3 3 J08

Short Essays

1. Classify refractive errors. Add a note on hypermetropia. 34 70 D18(RS3)
2. Hypermetropia—types, clinical presentation, complications and management (optical correction). 34 71 J08(RS2), D17(RS3), J04, J16 J10(RS2), D11(RS2), J16(RS3), J18(RS3), D02, D05, J10, D10, J17
3. Aphakia—define, causes, clinical features (signs), management/optical correction (unilateral aphakia), visual rehabilitation. 37 81 J11(RS2), D17(RS3), J04, J16 J10(RS2), D11(RS2), J16(RS3), J18(RS3), D02, D05, J10, D10, J17

Section II: Optics and Refraction**CHAPTER 3
ELEMENTARY AND
PHYSIOLOGICAL OPTICS****Short Answers**

1. Mention three uses of prisms in ophthalmology. 27 552 J06
2. Convex lenses—three uses. 28 551 J07

**CHAPTER 4
ERRORS OF REFRACTION AND
ACCOMMODATION****Long Essays**

1. Describe the types and optical treatment of various refractive errors? 34 70 D13(RS2)
2. Define hypermetropia, discuss the etiology, types, clinical features and management of hypermetropia. 34 71 J12(RS2), D13
3. Define myopia. Discuss the etiology, types, symptoms/signs and management of myopia. 38 73 J14(RS2), J15(RS3), D16(RS3), D00, J03, J12
4. Discuss types/classification, etiology and management of astigmatism. 42 78 J19(RS3), D16

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13. Describe the various uses of contact lens.	51	213 J14
14. Describe the various type of surgeries performed to correct myopia.	52	76 J17
Short Answers		
1. Accommodation.	45	86 D19(RS3)
2. Draw the optical diagram of emmetropic, myopic and hypermetropic eye?	34, 38	70 D02
3. Aphakia—causes, signs, spectacle correction.	37	81 J13(RS3), J14(RS2), D14(RS3)
4. Describe the stroma's conoid.	42	79 J13
5. Anisometropia—define, three causes, two problems, significance.	44	85 D07(RS2), D10, J13 J15(RS3)
6. Presbyopia.	47	87 D11(RS2), J16(RS3)
7. Bifocals.	50	88 D15(RS3), J01, J02, D04, D06, J08
8. Contact lenses—three advantages and disadvantages, indications, three complications.	50	212 D03, D10 J09
9. What is surgical treatment of myopia?	52	76 J09
10. Enumerate types of kerato refractive surgery.	52	76 J17(RS3) J08(RS2), D13(RS2), D15(RS3)
11. Radial keratotomy.	52	76 J17(RS3) J08(RS2), D13(RS2), D15(RS3)
12. LASIK.	52	77 J17(RS3) J08(RS2), D13(RS2), D15(RS3)

Section III: Diseases of Eye and Ocular Adnexa

CHAPTER 5

DISEASES OF CONJUNCTIVA

Long Essays

- Classify conjunctivitis. Discuss clinical features and management of trachoma.
- Discuss the differential diagnosis of acute conjunctivitis and how you manage a case of acute conjunctivitis.

	KFRN	BSAK
3. Discuss etiology, clinical features, complication and management of ophthalmia neonatorum.	77	151 J14
4. Discuss etiology, clinical features, complications and management of ptterygium.	89	165 J10
Short Essays		
1. Membranous conjunctivitis.	—	152 J10(RS2), D10(RS2), D08
2. Write briefly on phlycten.	—	150 J10
3. Describe the clinical features and management of purulent conjunctivitis.	63	153 J13(RS3), D14(RS3), J06
4. Angular conjunctivitis (clinical features and management).	66	155 J09(RS2), D06, J07, J12, D13
5. Trachoma—define, WHO classification, clinical (ocular) features, complications, treatment, SAFE, and control project.	67, 501	155 J09(RS2), D06, J07, J12, D13
6. What is a pannus? Discuss causes of pannus. How do you treat pannus?	69	156 D09, D10
7. Ophthalmia neonatorum.	77	151 D09(RS2), D13(RS2), J08
8. Allergic conjunctivitis.	79	159 J19(RS3)
9. Vernal keratoconjunctivitis (spring catarrh)—clinical features and management.	80	162 J08(RS2), J11(RS2), D11(RS2), J14(RS2), D14(RS3), D15(RS3), J16(RS3), D16(RS3), D17(RS3), D00, D01, D03, J11, D12, J13, D14

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10. Phlyctenular conjunctivitis/disease—clinical features and management.	84	160	J12(RS2), D19(RS3), J02, D06, D09	
11. Discuss pinguecula.	89	164	J14(RS2)	
12. Pterygium—define, treatment of recurrent pterygium (two agents used), surgical management (indications).	89	165	D09(RS2), J15(RS3), J04, D05, J12, D12, D15	
Short Answers			CHAPTER 6 DISEASES OF CORNEA	
1. Tabulate differences between pseudo-membranous and membranous conjunctivitis.	90	166	D16	
2. Causes for pseudomembranous conjunctivitis.	—	148	J04	
3. Membranous conjunctivitis.	—	152	J17(RS3)	
4. Pannus.	69	156	J19(RS3)	
5. Phlycten.	—	160	D08(RS2)	
6. Herbert's pils.	69	156	D11(RS2), J16(RS3)	
7. Trachoma—three complication/six squeal/treatment.	70	155	J18(RS3), D01, D02, J05, J12, J14, J16	
8. Viral conjunctivitis—causes.	74	154	J09	
9. Ophthalmia neonatorum.	77	151	J12(RS2)	
10. Spring catarrh (Vernal-keratoconjunctivitis)—types/signs/treatment	81	162	D13(RS2), J16(RS3), J18(RS3), J04	
11. Pinguecula	89	164	J08(RS2)	
12. Pterygium (surgical management, three complications).	89	165	D15(RS3), J08, D15	
13. Pseudopterygium—define/causes.	90	166	D16(RS3), D06	

	KHRN	BSAK	KHRN	BSAK
14. Define chemosis and ecchymosis. Mention two causes for each.	92	145	D02, J11	
15. What are the causes for subconjunctival hemorrhage and how is it managed?	92	171	J09(RS2), D12(RS3), J03, J05, J07, J09, D13, D16	
Long Essays			CHAPTER 6 DISEASES OF CORNEA	
1. Define corneal ulcer. Mention the stages of corneal ulceration. Discuss the causes, clinical features, diagnosis, complications and management of a uncomplicated bacterial corneal ulcer (bacterial keratitis).	102	179	J13(RS3), J05, D07, D12	
2. Name three organisms which can penetrate intact corneal epithelium. Describe the etiopathogenesis, ocular manifestations (clinical features), investigation, complications and management of hypopyon corneal ulcer.	102, 105	179, 185	J08(RS2), D15(RS3), J18(RS3), J07, D10, D16	
3. Fungal keratitis/corneal ulcer (keratomycosis)—etiology, clinical features and management. Add a note on causes of non-healing corneal ulcer.	109, 108	187	J09(RS2), J19(RS3), J02, D03, J13	
4. Discuss various lesions of the cornea caused by herpes simplex. Add a note on treatment.	111	189	D08	
Short Essays				
1. What are the factors responsible to protect the cornea against infection?	—	—	D11	
2. Describe ideal recipient for penetrating keratoplast.	—	—	J09	
3. Cornea—brief anatomy (mention layers).	98	3	D12(RS3), D03	

	KHRN	BSAK	KHRN	BSAK
4. Discuss factors for corneal transparency.	100	—	J17(RS3)	
5. Perforating corneal ulcer.	103	182	J12(RS2)	
6. Hypopyon corneal ulcer.	105	185	J14(RS2)	
7. Complications of corneal ulcer and sequelae of its perforation (complications of a perforated corneal ulcer).	106	181	J03, J11, J15, D15	
8. What is the role of atropine in the treatment of corneal ulcer? What alternative drug can be used in patients allergic to atropine? What drugs can be used if atropine fails to dilate the pupil?	108	185	D02	
9. Fungal corneal ulcer (fungal keratitis)—fungi responsible, clinical features, treatment (name two antifungal used in ophthalmology).	109	187	D11(RS2), J15(RS3), J16(RS3), D08, D11, J16, J17	
10. Herpes simplex keratitis.	110	189	D09(RS2)	
11. Dendritic ulcer—clinical features and management.	111	190	J18(RS3), D18(RS3), D01, J11, D14	
12. Herpes zoster ophthalmicus—ocular manifestations, complications and management.	113	192	J01, D04	
13. Acanthamoeba keratitis.	116	189	D07(RS2), J11(RS2), J13(RS3), D17(RS3)	
14. Neuroparalytic keratitis—etiology, clinical features and treatment.	118	194	D10	
15. Exposure keratitis (causes and management).	119	194	D08(RS2), D13, D16(RS3)	
16. Peripheral ulcerative keratitis (PUK)—management.	120	195	D00	
17. Mooren's ulcer—clinical features and treatment.	120	196	D00	

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18. What are causes of deep keratitis? Intersitial keratitis—stages, clinical features, management.	124	199
19. Arcus senilis—diagnostic criteria.	126	201
20. Keratoconus.	135	206
21. Corneal edema.	137	177
22. Corneal opacity—treatment.	138	—
23. Keratoplasty—types, indication (penetrating keratoplasty) and contraindications. Add a note on eyebank.	141, 509	488, 493
Short Answers		
1. Layers of cornea—list/draw a labeled diagram.	99	4
2. What is the nerve supply of cornea? Give two causes for diminished corneal sensation.	99	5
3. What are the stages of corneal ulcer?	103	179
4. What is hypopyon? Give three causes for hypopyon corneal ulcer.	105	185
5. Sequel of corneal ulcer perforation.	106	182
6. Corneal scars.	106	180
7. Atropine sulfate 1% in corneal ulcer.	108	185
8. Mention features of fungal hypopyon.	110	188
9. Name two investigations for fungal corneal ulcer. Mention two topical and two systemic antifungal agents.	110	188
10. Herpes simplex—corneal signs.	111	190
11. Herpes zoster ophthalmicus—ocular manifestations.	113	192
12. Exposure keratitis and treatment.	119	194
13. Mooren's ulcer.	120	196
14. Enumerate features of corneal dystrophies.	128	203

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15. Keratoconus—signs.	135	206	J15(RS3), D16(RS3), J10	149 —	J19(RS3)
16. Corneal opacity—three grades.	138	177	D14(RS3)	149 —	J16, J17
17. What is anterior staphyoma?	138	182	D06	150 —	D07
18. Keratoplasty (indications).	141	488	J11(RS2), J12(RS2), D16(RS3), D17(RS3), D18(RS3), D03, J12, J15	—	
CHAPTER 7 DISEASES OF SCLERA					
Short Essays					
1. Episcleritis—define, causes, signs and symptoms and its management. How do you differentiate episcleritis and scleritis?	146	215	D08(RS2), J11(RS2), J13(RS3), J16(RS3), D17(RS3), J06, D10	158 235	D11(RS2), J16(RS3)
2. Scleritis (classify, clinical features, systemic association, management).	147	216	J08(RS2), D16(RS3), D06, D07, J13	163, 158	D09(RS2), D10(RS2), J17(RS3), D19(RS3), J01, D04, J10, D11, D15
3. Scleromalacia perforans.	148	217	D11	—	—
4. What is sclera and staphyloma? Staphyloma—define, classify, causes, treatment.	149	—	D00, D10, D16	176 243	D14
Short Answers					
1. Episcleritis.	146	215	J14(RS2)	158	235
2. Deep scleritis.	147	216	D15(RS3)	159	226
3. Scleromalacia perforans.	148	217	D09, D14	—	J08(RS2), J12(RS2), J16
4. Mention complication of scleritis.	149	—	J12	—	J15(RS3), D01, J03, D03, D13

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5. Sclaphyloma.
6. Classify saphylomas.
7. Mention causes of posterior saphyloma.

CHAPTER 8
DISEASES OF UVEAL TRACT**Long Essays**

1. Discuss clinical features and complications of chronic iridocyclitis.
2. Discuss the etiology, clinical features and management of granulomatous iridocyclitis.
3. Discuss the differential diagnosis of acute red eye. Classify uveitis and discuss etiopathogenesis, classification, clinical features, sequelae and complications and management of acute iridocyclitis.

4. Enumerate causes of red eye. Discuss the symptoms, signs and management of anterior uveitis.
5. Classify endophthalmitis and discuss the clinical features and management of acute postoperative endophthalmitis.

- Short Essays**
- Pars planitis—complication.
 - Classify uveitis and add note on principles of management of acute iridocyclitis.
 - Acute iritis/iridocyclitis.
 - Granulomatus uveitis (iridocyclitis).
 - Acute anterior uveitis (iridocyclitis)—clinical signs, investigations and its management (of recurrent uveitis).

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5. Acute anterior uveitis (iridocyclitis)—clinical signs, investigations and its management (of recurrent uveitis).

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6. What are keratic precipitates? What are the different types of keratic precipitates	159	226 J13(RS3)
7. What do the terms occlusive pupillae and seclusio pupillae denote?	161	229 D02
8. Occulsio pupillae.	162	229 D14(RS3)
9. What is rubeosis iridis? Mention its causes and complications.	162	228 D01
10. Discuss the effect of anterior uveitis on intraocular pressure.	162	229 D00
11. Discuss the mechanism of glaucoma in a patient with uveitis.	162	230 D07(RS2)
12. Phthisis bulbi.	163	230 J15(RS3)
13. Describe features of granulomatous and non-granulomatous uveitis.	164	226 J11
14. What are the differences between granulomatous and non-granulomatous uveitis?	164	226 J01, D04, J12, J15, J17
15. What are the pharmacological effects of atropine in the eye? Mention its uses.	164	231 J01, J02, D04
16. (Acute bacterial postoperative) endophthalmitis—clinical features, management.	176	243 J10(RS2), D05, D12, J13
17. Panophthalmitis.	178	244 D08(RS2), J04, D10
18. Evisceration—indications and technique.	178	499 D07(RS2), D06, J13, J14
19. Malignant melanoma of choroid (clinical features).	180	374 J12(RS2), D07

Short Answers

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5. Coloboma of iris.	154	221
6. Mention three syndromes associated with uveitis?	156	225 J02
7. What are the features of granulomatous uveitis?	158	226 J14
8. Keratic precipitates—three types.	159	226 J07
9. Aqueous flare and its detection.	160	226 J13(RS3)
10. Occlusive and seclusive papillae.	161	229 J12(RS2), J18(RS3)
11. Rubeosis iridis—causes and complications.	162	228 D02
12. Mention the causes of glaucoma in iridocyclitis.	162	230 J11
13. Phthisis bulbi.	163	230 J18(RS3)
14. Management of acute anterior uveitis.	164	231 J11(RS2), D17(RS3)
15. Mention three differences between granulomatous and non-granulomatous uveitis.	164	226 J08
16. VKH syndrome.	175	238 J10(RS2)
17. Evisceration—define, two/three indications.	178	499 D08(RS2), D14(RS3), D08, D14, D16
CHAPTER 9 DISEASES OF LENS		
Long Essays		
1. Define cataract. Classify cataract. Describe the types, stages of senile cataract. Discuss clinical features of senile cataract and its management with recent developments. Add a note on phacoemulsification.	187, 193, 202,	256, 262, J13(RS3), J17(RS3), J08, D10, J12, J14
2. Congenital/developmental cataract—classification, etiology, morphological type, clinical features, management and complications.	188	257 D09(RS2), J14(RS2), J02, J04, J17
3. Cortical cataract—etiology, symptoms and stages.	193	263 D15(RS3)
4. Enumerate parts of uveal tract.	151	8 J09

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4. Senile immature cataract—etiology, clinical features and management.	194	263	J11(RS2), D17(RS3)	9. Describe the differences between conventional extracapsular cataract extraction (ECCE) from phacoemulsification.	205	274	J13
5. Discuss the clinical features and management of senile mature cataract. Add a note on early complications of cataract surgery.	194, 202, 219	264, 481	D13	10. Discuss the advantages and disadvantages of phacoemulsification.	205	275	D14
6. Discuss the complications of senile cataract. How will you manage them?	199	266	D00	11. Intraocular lens (IOL)—define, types, advantages.	213	477	J12(RS2), D02
7. Discuss the preoperative assessment done for cataract surgery.	202	269	J03	12. Intraocular lens power calculation.	216	270	D16(RS3)
8. Classify types of cataract surgeries. Describe the surgical procedure of manual small incision cataract surgery.	204, 208	273, 472	D14(RS3)	13. Describe the complications of extracapsular cataract extraction.	217	482	J16
9. Describe and compare the various types of cataract surgeries?	204	470	D13(RS2)	14. Postoperative complications of cataract surgery.	219	481	D16(RS3)
Short Essays				15. Hyphema—define, causes, complications and its management.	219	445	D12(RS3), J17(RS3), D19(RS3), J02, D08, J11, J17
1. Congenital cataract (management).	188	257	D16(RS3), J13	16. After cataract.	221	277	D13(RS2)
2. Discuss the causes of cataract in patients under 30 years of age.	188	258	J05	17. Ocular manifestation of Marfan's syndrome.	222	254	J06
3. Zonular cataract.	189	260	D07(RS2), D08(RS2), J01, D04	Short Answers			
4. Discuss the complications due to hypermature cataract.	199	266	J09(RS2)	1. What is 'TORCH' test?	—	261	J09
5. Complicated cataract—define, causes and clinical features.	200	275	J08(RS2), J12(RS2), D12(RS3), J18(RS3), J19(RS3), J07, J11, J15, D16	2. Crystalline lens—parts, draw and label.	184	11	D15(RS3), J18(RS3), J15
6. What are the investigations done before cataract surgery?	202	269	D03	3. Nuclear cataract.	194	266	J12(RS2)
7. Discuss various macular function tests?	203	272	D05	4. Mention the clinical stages of senile cortical cataract.	194	267	J15
8. Describe the advantages of conventional extracapsular cataract extractions (ECCE) over intracapsular cataract extraction (ICCE).	204	478	J17	5. Symptoms of senile immature cataract.	194	268	D14(RS3)
				6. Morgagnian cataract.	195	265	D08(RS2)
				7. Mention three signs of hypermature cataract.	195	268	D01, J11
				8. Explain what is second vision (Second sight).	196	267	D09(RS2), J14
				9. Metabolic cataract.	199	276	J10(RS2)

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10. Mention the conditions in which following cataract occur.	200	457	D02	481 J02
a. Sunflower cataract.	448	448		
b. Rosette cataract.	201	277		J14
c. Occupational cataract.	199	276		
d. Snow flake cataract.	221	277		
e. After cataract.	200	275		
f. Complicated cataract.	200	275		
11. Complicated cataract—causes, clinical features.	D16(RS3), D07, J10, D13, D14 D10	J09(RS2), D16(RS3), D18(RS3), J01, D04 J07	29. Mention late (delayed) complications of cataract surgery.	220
12. Name different types of anesthesia used for cataract surgery.	204	467	30. After cataract (posterior capsule opacity)—define, types, treatment.	221
13. Advantages of phacoemulsifications?	205	275	31. Mention intraocular lens related complications.	221
14. Mention three advantages of small incision cataract surgery.	205	274	32. Subluxation of the lens—four causes/ three syndromes associated.	223
15. Describe the differences between phacoemulsification and conventional extracapsular cataract extraction?	205	274	33. CHAPTER 10 GLAUCOMA	231, 287
16. Types of extracapsular cataract extraction.	206	273	Long Essays	J08, J15
17. Small incision cataract surgery.	208	274	1. Classify glaucomas and discuss about clinical features and management of congenital glaucoma.	233
18. What is phacoemulsification?	211	275	2. Enumerate the causes for gradual loss of vision. Primary open angle glaucoma/chronic simple glaucoma—etiology, risk factors, pathogenesis, clinical features, field defects, diagnosis and management (medical/drugs used).	514, 236
19. Name different types of intraocular lenses.	213	478	3. Acute primary angle closure glaucoma—etiology, predisposing/risk factors, clinical features and treatment (of acute attack).	246, 251
20. What are the differences between AC-IOL and PC-IOL?	213	479	Short Essays	289
21. Name various materials used in manufacturing of intraocular lens.	214	480	1. Mechanism of primary and secondary angle closure glaucoma.	D10(RS2), J12(RS2), J15(RS3), J13, D14
22. Types of PC-IOL.	214	479	2. Draw and label a diagram of aqueous outflow from the eye.	299, 311
23. IOL power calculation.	216	270		D00, J12
24. What is SRK formula?	216	271		
25. Enumerate preoperative complications of cataract surgery.	217	—	D07	

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3. Describe circulation of aqueous humor.	229	30	J09
4. Factors responsible for maintenance of intra-ocular pressure.	229	282	J19(RS3)
5. Buphthalmos (congenital/infantile glaucoma)—clinical feature and management.	232	287	D08(RS2), D10(RS2), J11(RS2), D13(RS2), D17(RS3), J04, J06, J10, D13
6. Primary open angle glaucoma/ chronic simple glaucoma—optic disc changes, visual field defects, medical management.	236	298	D11(RS2), J14(RS2), J01, J02, D03, D04, D09, D11, D15, J16
7. Topical drugs in glaucoma.	243	308	J10(RS2)
8. Angle closure (narrow angle) glaucoma—causes, clinical stages, clinical features and treatment (acute congestive attack).	246	289, 296	D18(RS3), J04, J05, D05, J14
9. Iris bombe.	247	229	D15(RS3)
10. Acute congestive glaucoma (clinical features, management and differential diagnosis).	251	290	J08(RS2), D15(RS3), D01, J03
11. Chronic congestive glaucoma.	253	292	D09(RS2)
12. What is absolute glaucoma?	254	292	J04, J12
13. How do you recognize and treat secondary glaucoma due to hypermature cataract?	254	312	D03
14. Lens induced glaucoma (LIG)—clinical features and treatment.	254	311	D18(RS3), J09
15. Phacolytic glaucoma.	255	312	J15(RS3), D08
16. Neovascular glaucoma—etiology and clinical features.	257	314	J09(RS2)
17. Pseudoexfoliation syndrome/glaucoma.	257	311	J09(RS2), J18(RS3), D10

Short Answers

1. Optical iridectomy.
2. How is aqueous humor formed?
3. Congenital glaucoma (buphthalmos)—management.
4. Optic disc changes in glaucoma.
5. Typical field defects/visual field changes of primary open angle glaucoma.
6. Mention provocative tests for open angle glaucoma.
7. Iris bombe (define, two causes).
8. Mention stages of narrow angle glaucoma (primary angle closure glaucoma).
9. Mention three topical drugs and their mechanism of action in treatment of primary angle closure glaucoma.
10. Glaukomflecken.
11. Give three causes for secondary glaucoma.
12. What are lens-induced glaucomas?
13. Mention three causes for neovascular glaucoma.
14. Discuss the mechanism of steroid-induced glaucoma.
15. Indications of peripheral iridectomy.
16. Mention uses of mitomycin C in eye.
17. Mention two cyclodestructive procedures. What are the associated complications?

CHAPTER 11 DISEASES OF VITREOUS

Short Essays

1. Asteroid hyalosis.
2. Vitreous hemorrhage—causes, management.

Short Answers

1. Types of vitreous opacities.
2. Asteroid hyalosis.
3. Synchysis scintillans.
4. Vitreous hemorrhage—mention three causes and three complications.

CHAPTER 12 DISEASES OF RETINA

Long Essays

1. (Proliferative) diabetic retinopathy—define, ETDOR's classification, clinical features and management.
2. Rhegmatogenous retinal detachment—clinical features, risk factors and management.
3. What is leukocoria? Enumerate the causes for the same (differential diagnosis of amaurotic cat's eye reflex in a child). Describe retinoblastoma in detail (management).

4. Retinitis pigmentosa—etiology, different types, clinical features, fundus picture.
5. (Proliferative) diabetic retinopathy (clinical features/fundus picture/ complications/treatment).

6. Retinitis pigmentosa—etiology, different types, clinical features, fundus picture.
7. (Rhegmatogenous) retinal detachment—define, classify, clinical features and management.

8. Retinoblastoma—clinical stages, histopathology, clinical presentation, management.
9. Differential diagnosis of amaurotic cat's eye reflex.
10. Enucleation—indications, contraindications, procedure (steps) for enucleations.

Short Essays

1. Eale's disease.
2. Central retinal artery occlusion (fundus picture).
3. (Ischemic) central retinal vein occlusion—fundus picture/two complications.

4. Hypertensive retinopathy—classify/Stages, fundus picture (ophthalmoscopic appearance) in each stage (Grade III).

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D08(RS2),
J09(RS2),
D10(RS2),
J11(RS2),
D14(RS3),
D02, J04,
J05, D05,
D07, J10

D09(RS2),
D12(RS3),
D13(RS2),
J17(RS3),
J15(RS3),
D00, D06,
J07, D09,
D13, D14,
J15, D15,
D16

D10(RS2),
J15(RS3),
D19(RS3),
D09, J13,
J17

D10(RS2),
J10(RS2),
D11(RS2),
D12(RS3),
J15(RS3),
J16(RS3),
J16

D11(RS2),
J16(RS3),
J17(RS3),
D19(RS3),
D05, D11

D15(RS3)

J09(RS2),
D14(RS3),
J03, J10,
J11, D13

D08(RS2),
D19(RS3),
D06, D15

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KHN

2. Fundus picture of central retinal artery occlusion.	277	333	D03
3. Mention four signs in hypertensive retinopathy.	282	351	D12(RS3)
4. Discuss fundus picture in diabetic retinopathy	287	354	J11(RS2), D17(RS3)
5. Retinitis pigmentosa (three diagnostic signs/three systemic associations).	296	342	J12(RS2), D16(RS3), J03, J04, J11, J15
6. Photoretinitis.	301	—	D09(RS2)
7. Classify retinal detachment. Mention three surgical modalities in the treatment of retinal detachment.	309	345	J13(RS3), D05, D09, D12
8. Three causes for retinal detachment.	309	345	J05
9. Mention two causes for exudative retinal detachment.	312	345	D12(RS3)
10. Retinoblastoma—stages, histopathology, clinical features, treatment.	314	379	D07(RS2), D08(RS2), J19(RS3), J01, D04, D09, J10, D13, J15
11. Sturge-Weber syndrome—define/ features.	320	378	J04, D11
12. Enucleation (indications).	320	499	J08(RS2), J11(RS2), D17(RS3), J05, J06
CHAPTER 13 <u>NEURO-OPTHALMOLOGY</u>			
Long Essays			
1. Describe the pathway of the pupillary light reflex. Discuss normal and abnormal reactions of the pupil.	327	44	D09
2. What are the causes for sudden loss of vision in adults? What is the etiology, stages, fundus picture and differential diagnosis of papilledema?	514, 336	366	D07(RS2), D03
Short Answers			
1. Tubular vision—two causes.	—	—	D14(RS3), J17(RS3), J03, J04,
2. Night blindness.	341	511	D09(RS2), J14(RS2), J19(RS3)
3. Color blindness.	342	40	—

	KHRN	BSAK			KHRN	BSAK	
2. Visual pathway (draw and label).	322	43	J08(RS2), J17	22. Two tests for malingering.	344	—	D12(RS3), J19(RS3)
3. What is Marcus Gunn pupil? Mention three conditions.	328	45	D10(RS2), D05, D10 J10(RS2), D14(RS3) J11(RS2), D17(RS3)	23. Name three demyelinating diseases.	347	—	
4. Argyll Robertson pupil.	329	46	D10(RS2), D14(RS3) J10(RS2), D10(RS2)	CHAPTER 14 DISORDERS OF OCULAR MOTILITY			
5. Adie's pupil.	329	46		Long Essay			
6. Six causes of chronic retrobulbar neuritis.	330	362	J01, J02, D04 D12(RS3) J08(RS2)	1. Classify squint. Discuss clinical features, investigation and management of paralytic squint.	358, 367	425, 433	J06, D07
7. What are the diagnostic criteria for acute retrobulbar neuritis?	330	363		2. Mention the names of extraocular muscles and its actions.	349	16, 418	J07, J15
8. Mention two signs of optic neuritis.	330	363		3. Amblyopia—definition, causes and treatment.	355	424	D10(RS2), D14(RS3)
9. Toxic amblyopia.	332	364	J13	4. What is anisometropic amblyopia? How do you treat it?	356	424	D03
10. Mention the causes of toxic optic neuropathy.	332	364		5. Concomitant squint—clinical features and assessment/investigations.	361	427	D15(RS3), D07
11. Define papilledema.	336	366	J09	6. Paralytic squint.	367	433	J08(RS2)
12. Mention three causes of optic disc edema.	336	367	J14	7. Differentiation between paralytic (concomitant) and nonparalytic (incomitant) squint?	371	434	J09(RS2), D18(RS3), J03, D05, D10, J12
13. Types of optic atrophy.	338	370	J14, D16				
14. Differences between primary and secondary optic atrophy.	338	370	J04				
15. Three causes for optic atrophy.	340	370	D03				
16. Primary optic atrophy—causes/optic disc changes.	340	370	J14(RS2), J15(RS3)				
17. Secondary optic atrophy—causes and fundus appearance.	340	370	D10(RS2), J12				
18. Consecutive optic atrophy—define, two causes.	340	370	J10(RS2), D00				
19. Nyctalopia (night blindness)—define, four causes.	341	511	D07(RS2), D19(RS3), D05, D07, J08, D12, D13				
20. Color blindness—classify/testing.	342	40	D07(RS2), J15(RS3), D08				
21. Amaurosis fugax.	343	334	D15	3. Superior oblique muscle—origin, insertion, nerve supply, three actions.	349	16	D07(RS2), D03, J05, D09, J11

	KHRN	BSAK
4. Superior rectus muscle—nerve supply, actions.	349	16 D10
5. What are the depressors of eye? Mention their nerve supply.	349	16 J12
6. Amblyopia—classify, etiology, significance.	355	424 J09(RS2), D11(RS2), J16(RS3) D08
7. Classify diplopia. Give one example for each of them.	357	422 J01, D04
8. What is pseudosquint? Give two examples.	358	425 J01, D04
9. Classification of squint.	358	426 D19(RS3)
10. Mention two tests to measure the amount of squint.	359	430 D11
11. Mention the methods and management of concomitant squint?	364	431 D01
12. Hirschberg test.	365	430 J13(RS3)
13. Paralytic squint—causes, features (signs).	367	433 J14(RS2), J06, J13
14. Differences between concomitant (paralytic) and incomitant (non-paralytic) squints.	371	434 D14
15. Name the weakening procedures to correct squint.	372	431 J09(RS2)
16. What is nystagmus? Name two causes of nystagmus.	373	440 D10

Short Answers

1. Draw and label a diagram of the cross section of the upper eyelid.

2. Ulcerative blepharitis (complications).

3. Hordeolum externum (clinical features and management).

4. Chalazion [define, management (operation), complications].

	KHRN	BSAK
5. Hordeolum externum (stye)—define, causes, clinical features and management.	383	138 J14(RS2), D05, D07
6. Chalazion—etiology, clinical features, complications and management.	383	139 J15(RS3), J02, J03, J06, J11
7. Trichiasis—define, causes, treatment.	385	126 D00
8. Entropion—classify, causes, management.	387	121 J19(RS3), J05, D09, D10
9. Senile ectropion.	390	124 D08
10. Symblepharon—define, causes and its management.	392	127 D12(RS3), J17(RS3)
11. Lagophthalmos (causes, complications and treatment).	393	127 J12(RS2), J01, D04, D06, J16
12. Tarsorrhaphy—indications, steps.	394	495 D08, D12
13. Ptosis—define, classify, causes, correction.	395	130 D12(RS3), D16(RS3), D02, D06, J09, J15, D15

**CHAPTER 15
DISEASES OF EYELIDS****Short Essays**

- Anatomy of eye lid.
- Blepharitis (causes, clinical manifestations and its treatment).
- Ulcerative blepharitis—clinical features, complications and treatment.
- Squamous blepharitis.

	KHRN	BSAK
1. Anatomy of eye lid.	377	17 J18(RS3)
2. Blepharitis (causes, clinical manifestations and its treatment).	380	135 J08(RS2), D13(RS2), J17(RS3), J07, J08 D01, J11
3. Ulcerative blepharitis—clinical features, complications and treatment.	380	136 D01, J13
4. Squamous blepharitis.	381	135 D14(RS3)

	KHRN	BSAK	KHRN	BSAK
6. Trichiasis (two causes).	385	126 D12(RS3), J10	415	497 D02
7. Cicatricial entropion—three causes.	387	123 D14		
8. Ectropion—classification.	389	124 J17		
9. Symblepharon (define, two causes).	392	127 D07(RS2), J08(RS2), J19(RS3), D09, J12, J15		
10. Lagophthalmus (etiology and management).	393	127 J11(RS2), J17(RS3), D17(RS3)		
11. Tarsorrhaphy—define, four indications.	394	495 D01	404	20 D13(RS2)
12. Ptosis (define and classify/three causes/treatment).	395	130 J13(RS3), D15(RS3), J19(RS3), D03, J11, D12, D16	404	28 D07(RS2)
13. What is Marcus Gunn jaw winking phenomenon?	395	130 J05	406	403 J11(RS2), D17(RS3), J05, D07
14. Homer's syndrome—signs (ocular components).	395	47 D10(RS2), D12(RS3), J17(RS3), J01, D04, D15	407	407 D10(RS2)
CHAPTER 16				
DISEASES OF LACRIMAL APPARATUS				
Long Essays				
1. Discuss the causes of watering in the eye. How will you investigate a case of epiphora?	408	410 D01	411	414 J02, J08
2. Chronic dacryocystitis—define, etiology, clinical features, complications and (surgical) management. Add a note on anatomy of the nasolacrimal apparatus.	411, 402	414, 20 D08(RS2), D12(RS3), D14(RS3), D05, D06, J16	412	414 J10(RS2), J18(RS3), J01, D03, J04, D04, J05
3. Acute dacryocystitis—define, etiology, clinical manifestations, complications and treatment.	412	414 J09, J11	413	498 J04
Short Answers				
Short Essays				
1. Dacryocystectomy (DCT)—indications		—	417	D16
2. Tear film—layers (constituents)and functions		404	28	D08(RS2), D11(RS2), J13(RS3), D13(RS2), J16(RS3), D01, J07, D09, J12
3. Epiphora—define, 3 causes.		408	410	D09(RS2), D08

	KHRN	BSAK
4. Congenital dacryocystitis.	410	415
5. Chronic dacryocystitis.	411	414
6. Acute dacryocystitis (clinical features and management).	412	414
7. Dacryocystorhinostomy (DCR)—steps, complications, contraindications.	413	498 J10, J13, J15
CHAPTER 17 DISEASES OF ORBIT		
Long Essay		
1. Orbital cellulitis—etiology, clinical features and management.	426	393 D07(RS2), D08
Short Essays		
1. Proptosis—define, different causes (at age of 60 years), investigation and management.	420	388 D10(RS2), J08
2. Discuss causes for uniocular proptosis.	421	388 D12(RS3)
3. Orbital cellulitis—clinical features and management.	426	393 J11(RS2), J17(RS3), D17(RS3), J01, D04, J17
4. Draw a neat labeled diagram of cavernous sinus and its connections.	428	24 D11
5. Cavernous sinus thrombosis.	428	400 D07
6. What is endocrine exophthalmos? Describe its mechanism and pathogenesis.	431	395 D02
7. Describe eye manifestations of thyroid ophthalmopathy/clinical features of thyroid eye disease.	431	396 D07(RS2), D12, D14
8. Blowout fracture (features).	440	450 D12(RS3), D09
9. Name three destructive surgeries in ophthalmology and discuss about exenteration.	443	— J08

KHRN	BSAK
1. Orbital hemorrhage—mention three causes.	—
2. Name the bones forming the medial wall of the orbit.	418
3. Proptosis (exophthalmos)—define, causes for (bilateral) proptosis (in adults/children).	420 388 J04, D09, J11, D11, J13, J15, J17
4. What is exophthalmus and enophthalmus? Mention two causes for each.	420, 424 388 D01
5. Mention causes for acute and gradual onset proptosis?	421 389 J02
6. Orbital cellulitis (features).	426 393 D15(RS3), D12
7. Lid signs in thyroid associated ophthalmopathy.	431 396 D11(RS2), J16(RS3), D09
8. Blowout fracture of orbit—state three signs.	440 450 D16(RS3)
9. What is exenteration? Name two indications for exenteration.	443 — D10
CHAPTER 18 OCULAR INJURIES	
Long Essay	
1. Classify the various ocular injuries and describe effects of blunt injury over an eye.	444, 446 443 D11(RS2), J16(RS3), J09, D11
Short Essays	
1. Classification of ocular injuries.	444 443 D16
2. Blunt ocular injury (mechanical effects, complications, management).	445 443 J12(RS2), D13(RS2), D05
3. Discuss the anterior segment features of blunt trauma to the eye.	447 445 J13
4. Traumatic hyphema	447 445 J15(RS3)

	KHRN	BSAK	KHRN	BSAK
5. Describe the lens changes following blunt injury to the eye.	447	447	D01, J05,	
6. Traumatic cataract.	448	448	J15 J10(RS2), D15	
7. Commotio retinae—define, treatment.	448	449	J13(RS3)	
8. Penetrating injury of the eye.	449	451	D18(RS3)	
9. Siderosis bulbi—etiopathogenesis and clinical features.	452	456	J03, D14, D16	
10. Sympathetic ophthalmitis (clinical features, treatment).	455	239	J10(RS2), J11(RS2), D15(RS3), D17(RS3), D06, J07, J09, D13, D16	
11. Chemical injuries/alkali burns to the eye (grading, managements and complication).	456	459	J14(RS2), D16(RS3), J19(RS3), J05, D11, J14	
Short Answers				
1. Corneal foreign body—removal.	444	453	J18(RS3), D19(RS3)	
2. Enumerate the iris abnormalities following blunt trauma.	447	446	D12	
3. Iridodialysis.	447	446	D15	
4. What are the effects of blunt injury on the lens?	447	447	D08	
5. Rosette cataract.	448	448	J13(RS3)	
6. Berlin's edema.	448	449	J10(RS2)	
7. Enumerate complications of retained intraocular iron foreign body.	451	455	D07	
8. Chalcosis—define, eye manifestations.	452	457	J09(RS2), D10 D02	
9. What is black eye and red eye? Mention three causes of red eye and one cause of black eye.	455	443		
10. Sympathetic ophthalmitis (clinical features).	455	239	J08, D15	
Section IV: Ocular Therapeutics				
CHAPTER 19 OCULAR PHARMACOLOGY				
Short Essays				
1. Various methods of administration of drugs in ophthalmic diseases.		463	48	
2. Antiviral drugs in eye disorders.		466	50	D15(RS3), J01, D01, D04
3. Antifungal drugs.		468	51	J11(RS2), D17(RS3)
4. (Newer) antiglaucoma drugs—classify, one example for each, discuss in detail any one.		469	53	J12(RS2) D07(RS2), J08(RS2), J15(RS3), D08
5. Use of prostaglandins in ophthalmology.		469	308	J09(RS2)
6. Timolol maleate—mechanism of action, dose and side effects.		470	308	J06
7. Pilocarpine—mode of action, uses and ocular complications.		472	309	D14(RS3), J17
8. Corticosteroids in ophthalmology—indications (uses), contraindications and complications.		473	54	D09(RS2), D11(RS2), J16(RS3), J13
9. Mention the uses of fluorescein in ophthalmology.		479	562	J08
10. Cycloplegics.		593	52	D11(RS2), J16(RS3), J18(RS3)
11. Mydrastics, their actions and side effects.		593	52	
12. Atropine—uses in ophthalmology.		108, 164, 593	52	D07(RS2), D19(RS3)
Short Answers				
1. State three drugs given as intravitreal injection with its concentration and its indication.		464	49	D16(RS3)

	KHRN	BSAK	KHRN	BSAK
2. Mention three antiviral drugs?	466	50	D00	
3. Antifungal drugs.	468	51	D09(RS2)	52
4. Classify antiglaucoma drugs.	469	53	D16	D08(RS2), J15(RS3), D06
5. Topical antiglaucoma drugs.	469	53	D15	
6. Mention three topical drugs and their mechanism of action in treatment of primary open angle glaucoma.	469	53	J14	
7. Mention three new antiglaucoma drugs and its dosage.	469	53	J08	
8. Name the drugs which decrease the aqueous production.	469	53	D10	
9. Timolol maleate (mode of action and side effects).	470	308	J13(RS3), D16(RS3), J18(RS3), D13	
10. Miotics.	471	51	J17(RS3), D03, J11	
11. Acetazolamide—three important side effects.	471	53	J05	
12. What are the pharmacological effects of pilocarpine in the eye? Mention its uses.	472	309	J07	
13. Mention three hyperosmotic agents and its dosage.	472	53	J10	
14. Steroid in ophthalmology (uses/three side effects).	473	54	J14(RS2), J03, J07, J11	
15. Mention six ocular diseases/three corneal ulcers in which steroid therapy is indicated.	474	54	D02, J17	
16. Uses of fluorescein in ophthalmology.	479	562	D13(RS2)	
17. Cycloplegic mydriatics in ophthalmology.	593	52	J08(RS2), J11(RS2), D13(RS2), D17(RS3), D18(RS3), J19(RS3)	
18. Mention three mydriatic agents with	593	52	D12(RS3), J06, D12	
CHAPTER 20 LASERS AND CRYOTHERAPY IN OPHTHALMOLOGY				
Short Essays				
1. What is Laser? Mention its (Nd-YAG laser) uses in ophthalmology.	481	558	J10, J15	
2. Lasers for posterior segment diseases in ophthalmology.	483	559	D15	
3. Uses of cryotherapy in ophthalmology	484	561	D18(RS3)	
Short Answers				
1. Laser—define, types, three/six uses in ophthalmology.	481	558	D10(RS2), J19(RS3), D01, D03, J08, J09, D16	
2. YAG Laser	482	558	J14(RS2)	
3. Mention the uses of lasers for anterior segment pathology.	483	559	D13	
4. Mention the uses of lasers in the management of retinal diseases.	483	559	D11	
5. Cryotherapy in ophthalmology—indications/three operations.	484	561	J09(RS2), D00	
Section V: Systemic and Community Ophthalmology				
CHAPTER 21 SYSTEMIC OPHTHALMOLOGY				
Short Essays				
1. Vitamin A deficiency (kerophthalmia)—WHO classification, ocular manifestations, management.	487	511	D07(RS2), D09(RS2), D13(RS2), J18(RS3), D18(RS3), J03, J06, J10	

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2. Bitot's spot.
3. Mention the ocular manifestations of leprosy.

Short Answers

- What are ocular components of myasthenia gravis.
- Vitamin A deficiency (WHO classification).
- Bitot's spots—clinical appearance, etiology and management (diet advised).
- Give sources of vitamin A.
- AIDS—ocular manifestations (three important retinal lesions).
- What are the ocular manifestations of leprosy?
- Causes of preventable blindness.
- Legal, economic and social blindness—define, three causes.
- Vision 2020—objectives and diseases targeted.
- National Trachoma Control Program.
- National Programs for Control of Blindness—Objectives.
- What are the three levels of National Program for Control of Blindness?
- District Blindness Control Society.
- Childhood blindness (below three years)—causes.
- Eye bank—functions.
- Eye donation.

**CHAPTER 22
COMMUNITY OPHTHALMOLOGY**

Long Essay

- Discuss the National Program of Control of Blindness (NPCB) in detail.

502 504 D15

Short Essays

- Legal blindness.
- Vision 2020.

496 502 D08(RS2)
499 515 D18(RS3),
 D14

**CHAPTER 23
CLINICAL METHODS IN
OPHTHALMOLOGY**

Section VI: Practical Ophthalmology

- National Trachoma Control Program.
- What is trachoma control project?
- National Program for Control of Blindness—aims and objectives.
- District Blindness Control Society (DBCS).
- Eye bank—define, activities, methods of corneal preservation.
- Eye donation.

501 501 502 504 509 510

508 508 J02, J05 J19(RS3),
 D03 D16

503 493 J01, D04,
 J12, J16,
 J17 D00, D15

510 493 D19(RS3),
 J01, D04

Short Answers

- Cause of permanent/incurable blindness.

— — Contd... —

Contd...

Short Essays	KHRN	BSAK
1. Differential diagnosis of gradual loss of vision.	514	264
2. Differential diagnosis of sudden loss of vision.	514	—
3. A 20-year-old boy presents with history of floaters in his left eye. Discuss the causes and outline the management.	515, 268	D00
4. What are the causes of papillary hypertrophy of conjunctiva? What is the difference between a follicle and a papilla in the conjunctiva?	521	147
5. Leukocoria (differential diagnosis).	526	D02
6. Cherry red spot—causes.	529	333
7. Tonometry—different techniques.	530	283
8. Classify tonometer. Mention briefly advantages and disadvantages of each.	530	119
9. Describe the assessment and significance of visual field analysis.	532	303
10. B-scan—its uses in ophthalmology.	542	569
Short Answers		D15
1. What is Imbert-Fick principle?	—	285
2. Sudden loss of vision—causes.	514	—
3. Gradual loss of vision—three causes.	514	—
4. Black spots in front of eyes—three causes.	515	—
5. Diplopia—causes.	515	—
6. Colored halos—causes.	J17	D05
7. Snellen's chart and its applications.	516	103
8. What is physiological role of blinking? What complications can absence blinking produce?	519	D02

KHRN	BSAK
9. What are the causes of follicles in the conjunctiva?	520
10. Mention three differences between papillary and follicular conjunctivitis.	520
11. Mention three importance differences between a conjunctival follicle and a papilla.	521
12. Decreased corneal sensation—causes.	523
13. Iris nodules—causes.	525
14. Define: (a) Polycoria, (b) Anisocoria, (c) Leukocoria.	525
15. Mydriasis—define, causes.	525
16. Name three pathological pupillary reactions.	526
17. Leukocoria (causes).	526
18. Cherry red spot—define, three causes.	529
19. Soft exudates in retina—causes.	529
20. Enumerate the various methods of recording intraocular pressure.	530
21. Classify tonometers.	530
22. Bitemporal hemianopia—define, two causes	530
23. Give one cause and site of lesion for: (a) Bitemporal hemianopia, (b) Centro caecal scotoma, (c) Right sided homonymous hemianopia.	530
24. Mention the types of ultrasonogram used in ophthalmology. Name two indications for their use.	542
25. A-scan biometry.	542

CHAPTER 24
CLINICAL OPHTHALMIC CASES

None

CHAPTER 25
DARKROOM PROCEDURES

Short Essays

- What is retinoscopy? Write briefly the principle of retinoscopy.
- Tabulate differences between direct and indirect ophthalmoscopy.

Short Answers

- Gonioscopy (angle structures seen). 589 293 D15(RS3), J02, J16
- Retinoscopy. 591 90 J14(RS2)
- Enumerate methods to assess the corneal curvature. 596 575 D07
- Pinhole test (principle). 599 549 D14(RS3), D18(RS3), D19(RS3), D10
- Mention advantages and disadvantages between direct and indirect ophthalmoscopy. 609 94 J06

CHAPTER 26
OPHTHALMIC INSTRUMENTS AND OPERATIVE OPHTHALMOLOGY

Short Essay

- Iridotomy.

Short Answers

- Enumerate types of anesthesia for intraocular surgery.
- Mention six anesthetic complications of intraocular surgery.

Long Essay

- Describe the various viral infections of the eye. How will you manage?

Short Essays

- Orbital apex syndrome.
- Differential diagnosis of nodules near the limbus.
- Mention the causes of nodule at the limbus.
- Meibomian cell carcinoma.

Short Answers

- What is pseudohypopyon? Mention two conditions which cause pseudohypopyon.
- Mention three ophthalmic manifestations of pituitary tumors.
- Mention three conditions where circumciliary congestion is seen.
- What is Hutchinson's triad?
- Six causes of nodule at limbus.